CITY OF MILPITAS

BIKEWAY MASTER PLAN

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BICYCLING OVERVIEW

Executive Summary

The Bikeway Master Plan consolidates all bicycle information developed by the Bicycle Transportation Advisory Commission (BTAC) and City staff including all policies previously adopted by the City Council into a single document for easy reference. The Master Plan highlights all of the bicycle improvement projects currently proposed throughout the city. These projects are mapped and described. The policies ensure that bicycle and pedestrian use and accommodations are considered in future construction projects.

This document serves as the basis for the guiding principles and implementing policies incorporated in the City's General Plan. This Bikeway Master Plan was recently updated to incorporate the changes related to the Midtown Specific Plan adopted in March 2002. Together with the Trails Master Plan an extensive network of bicycle and pedestrian facilities is to be created enhancing the livability and quality of life for our residential and business communities.

BICYCLING OVERVIEW

Opportunities and Constraints to Bicycling

The current land use patterns of the City of Milpitas demonstrate the need for a strengthened alternative transportation system. This Bicycling Overview outlines the physical opportunities and constraints to bicycling (and walking) posed by the regional climate, topography, roadway and rail systems. Existing bicycle usage data is presented to demonstrate the potential to significantly increase this form of transportation and mobility. This chapter highlights the inclusion of the Milpitas Bikeway Network in several local and regional plans. The chapter concludes with a description of the benefits of bicycling.

The mild Mediterranean climate and relatively flat topography of Santa Clara Valley support bicycling and other outdoor activities year-round. The City's existing system of 24 miles (38.6 km) of bike lanes and routes further support this transportation mode. This system continues to expand under the guidelines of the City's Bicycle Policy adopted in 1993. The Bicycle Policy requires review of all roadway improvements to determine whether bike lanes and/or routes are to be included with the development proposal. As a result many of the newer arterial streets include bike lanes enhancing the City's developed on-street bikeway system.

In 1994, the Milpitas City Council accepted a recommendation from the Bicycle Transportation Advisory Commission to develop an off road trails system that would provide an extensive network for bicyclists and pedestrians. This parallel effort resulted in the development of a Trails Master Plan which calls for expansion of the non-motorized transportation system through the addition of an urban trails network aligned along creek corridors, utility and railroad right of ways. These urban trails will further integrate the bikeway system and provide continuous routes for bicycle and pedestrian travel. These facilities should also reduce travel time throughout the bikeway system and encourage new riders to enjoy an alternative transportation environment with minimal interruption from traffic, noise and engine exhaust.

The Milpitas Bikeway System is crossed by two freeways and two Union Pacific Railroad tracks. In general, this infrastructure has fragmented the bicycle system. In addition, several large-scale residential neighborhoods have been built with surrounding sound and aesthetic walls which limits access to the existing bicycle and pedestrian facilities. Typically, shopping centers and neighborhoods are accessed through a limited number of entrances.

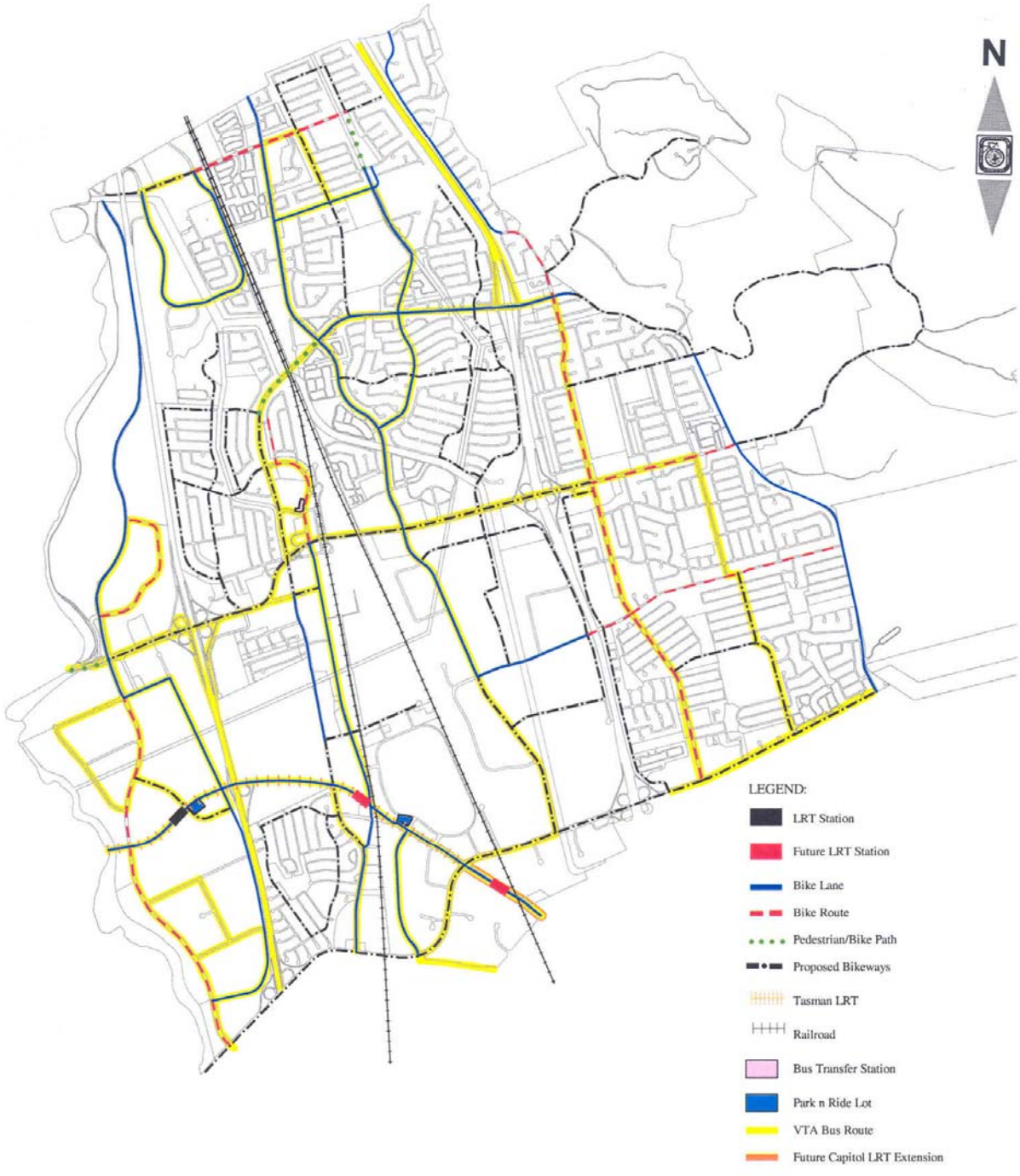
Support facilities for bicycling are improving and can be found at many City facilities. Bicycle racks are found in all of the City parks and near community buildings. All Santa Clara Valley Transportation Authority buses are now equipped with bicycle racks to facilitate intermodal commuting. The following map illustrates the overlap of bikeway facilities and transit facilities citywide.

Opportunities and Constraints to Bicycling (continued)

Bicycles are also permitted on both CalTrain and Bart during non-commute hours. Although not required, some local employers have made provisions for improved bicycle access on site. More needs to be undertaken along the lines of secured bicycle parking, showers and clothing storage facilities. While recent multi-family dwellings provide adequate automobile parking, many do not include secured bicycle storage. An effective Bicycle System includes an adequate supply of support facilities in addition to an integrated network of bikeways, if bicycling is to become a viable and popular transportation mode.

BICYCLING OVERVIEW

Bikeways and Transit Facilities Map



BICYCLING OVERVIEW

Bicycle Suitability Ratings

As part of the City's Bikeway System Map, the Bicycle Transportation Advisory Commission (BTAC) developed suitability ratings for both unsigned and signed bicycle routes and streets throughout the City. The rating system is a way of providing additional information to bicyclists increasing their awareness of roadway conditions that may affect their choice of routing given the trip purpose. The evaluation was a collaborative effort of BTAC. The streets average traffic count, speed limit and physical conditions were all considered in determining whether it received a beginner, intermediate or advanced rating. The City's traffic volume map reflecting average weekly daily traffic counts and the City's speed limit map are included in the appendix. The color ratings of green for beginner, blue for intermediate and red for advanced are intended to identify the knowledge base and riding ability of the bicyclists. This rating system is incorporated in the City's Bikeway Map and distributed at public events.

Beginner - Individuals with limited cycling ability and some knowledge of safety rules and the responsibilities of cyclists and motorists. Typically bike lanes, routes or residential streets with low traffic volumes and vehicle speeds under 30 miles (48.3 km) per hour.

Intermediate - Individuals have some previous experience in cycling and knowledge of the safety rules and responsibilities of cyclist and motorists. Typically collector streets with modest traffic volumes and 25-35 miles (40.2-56.3 km) per hour speed limits have been given an intermediate rating.

Advanced - Individuals capable of riding on roadways with high speeds and high traffic volumes and those thoroughly informed of the safety rules and responsibilities of the cyclists. Could include those who use the bicycle as a mode of transportation in excess of 50 miles (80.5 km) a week. Typically roads with high traffic volumes and high speeds over 40 miles (64.4 km) per hour receive this rating.

BICYCLING OVERVIEW

Bicycling Data

According to the 1990 census, only 0.4% of Milpitas residents bicycle to work. This is in sharp contrast to the County average of the 1.5%. This average is skewed by the presence of local colleges and universities, most notably Stanford University where the bicycle commute rate is 45.6%. However, the County average would be 0.8% with the exclusion of this outlier. This indicates the opportunity to at a minimum double the bicycle commute within Milpitas. The 1990 census data also reports that 1.3% of Milpitas residents walk to work. This figure is again below the County average of 2.1 %

1990 U.S. Census - Transportation to Work

MODE of TRAVEL	City of Milpitas	Santa Clara County
Car, Truck or Van		
Drive Alone	76.1 %	77.7%
Carpooled	15.8%	12.3%
Public Transportation	3.0%	3.0%
Motorcycle	0.7%	0.5%
Bicycle	0.4%	1.5%
Walked	1.3%	2.1%
Other Means	0.7%	0.5%
Worked at Home	2.1%	2.5%
Total Workers	25,757	796,605

The bicycle commute rate is affected by a variety of factors. Most importantly, an integrated bicycle and trails system with sufficient support facilities must be provided to encourage and enabled residents to choose an alternative transportation mode. Second, residents must live within a bicycle or walkable commute distance from their place of employment, local school, shopping center and recreational facilities. The historic land use patterns of the Bay Area have not supported this concept which is demonstrated by the job to housing imbalance data. Recent additions to the Milpitas and nearby cities housing stock will offer some potential to increase these modes of transportation.

BICYCLING OVERVIEW

Land Use

Forty-five percent of the valley floor lands in Milpitas have been devoted to residential land use. Approximately 35% has been developed as commercial and industrial sites. Less than 5% supports public buildings and parks and open space. The remaining 15% of the valley floor is undeveloped, although rapidly disappearing in the boom times of the late 1990s. Milpitas has been one of the fastest expanding cities in the Bay Area, growing at a rate of 4.1% per year. It is likely that Milpitas will reach total build out long before any date anticipated in the General Plan. As a result, it is critical that land be set aside for the expansion of bikeway and trail system with each planned development and redevelopment program.

There are many attractors and generators of bicycle trips within the city limits. These sites are identified on the following map and should be taken into consideration in all evaluations of the bikeway and trail systems. The following tables also identified those destinations that have accommodations for bicycle parking.

Attractors and Generators to Bicycle Travel

Important Destinations for Employees		
	Bicycle Parking Available	
Retail Centers	**Yes**	**No**
Beresford Center		⊘
Cresent Square		⊘
Foothill Square	🚲	
Great Mall of the Bay Area	🚲	
Lions Market	🚲	
McCarthy Market Place	🚲	
Milpitas Square	🚲	
Parktown Plaza	🚲	
Serra Shopping Center		⊘
Town Center	🚲	
Victorian Square		⊘
Business Centers		
California Landing Business Park		⊘
Fleming Business Park		⊘
Milpitas Business Park		⊘
McCandless Business Park		⊘
Oak Creek Business Park		⊘
Town Center Business Park		⊘

BICYCLING OVERVIEW

Attractors and Generators to Bicycle Travel

Important Destinations for Students and Families		
Education Facilities	**Bicycle Parking Available**	
	Yes	**No**
Foothill SDA Elementary	🚲	
Heald College	🚲	
Milpitas High School	🚲	
Calaveras Hills High School	🚲	
Russell Middle School	🚲	
Rancho Milpitas Middle School	🚲	
Burnett Elementary School	🚲	
Curtner Elementary School	🚲	
Milpitas Christian School	🚲	
Pomeroy Elementary School	🚲	
Randall Elementary School	🚲	
Rose Elementary School	🚲	
Sinnott Elementary School	🚲	
Spangler Elementary School	🚲	
St. John the Baptist School	🚲	
Weller Elementary School	🚲	
Zanker Elementary School	🚲	
Milpitas Public Library	🚲	
Parks and Recreation Facilities		
Ed Levin County Park	🚲	
Milpitas Sports Center	🚲	
Augustine Memorial Park	🚲	
Ben Rogers Park	🚲	
Cardoza Park	🚲	
Creighton Park	🚲	
Dixon Landing Park	🚲	
Foothill Park	🚲	
Gill Park	🚲	
Hall Park and Lagoon	🚲	
Higuera Adobe Park	🚲	
Hillcrest Park	🚲	
Jose Maria Alviso Adobe Park	🚲	
Milpitas Community Center	🚲	
Murphy Park	🚲	
Pinewood Park	🚲	
Sandalwood Park	🚲	
Sinnott Park	🚲	
Starlite Park	🚲	
Strickroth Park	🚲	
Hidden Lakes Park	🚲	
Oliver Jones Park	🚲	
Yellowstone Park	🚲	

BICYCLING OVERVIEW

Attractors and Generators of Bicycle Travel in Milpitas

BICYCLING OVERVIEW

Inclusion in Local and Regional Plans

The City of Milpitas 1994 General Plan identifies and supports pedestrian and bicycle modes of travel in the Circulation Element. In 1997, the City Council accepted the Trails Master Plan that identified the urban trail network. An amendment to the Circulation Element of the 1994 General Plan is being prepared to address the expansion of these alternative transportation facilities through the addition of the urban trails network. These bicycle and pedestrian facilities will be aligned along creek corridors and utility and railroad right of ways.

The approved Santa Clara County Bicycle Plan identifies regional bicycle routes that provide for intercity commuting. Portions of the Milpitas Bikeway System are identified in this regional plan.

The 1995 Countywide Trails Master Plan addresses the need for urban and rural trail routes throughout the County. The Coyote Creek Trail, which serves as the San Francisco Bay Trail and Juan Bautista de Anza National Historic Trail, is recognized for its regional significance. The Bay Area Ridge Trail - Diablo Range Route which traverse the hillside area of Milpitas has also been identified for its regional significance to the Bay Area. Calera Creek and the Calaveras routes are identified as connector trails to the hillside and provide recreational opportunities for residents. The Association of Bay Area Governments identifies the San Francisco Bay Trail route in Milpitas. The National Park Service details the Juan Bautista de Anza National Historic Trail in the Comprehensive Management and Use Plan. Each of these unique recreational, historical and transportation routes extend through Milpitas.

Bicycling and walking are recognized as vital forms of transportation in the newly authorized federal TEA-21 legislation. TEA-21 calls upon the states to maximize the efficiency of the existing roadway system and to provide for intermodal transportation. Pedestrians and bicyclists are integral to the success of the intermodal system. As a result, significant federal funds have been appropriated specifically for the purpose of improving bicycle and pedestrian facilities. These projects are Regional Plans included in the Regional Transportation Plan developed by the Metropolitan Transportation Commission and adopted by the California Transportation Commission.

BICYCLING OVERVIEW

Benefits of Bicycling

Bicycling as a mode of travel has the following benefits:

- Sustainable forms of transportation with minimal impacts on the natural world.
- Contributes no impact to the already cumulative poor air quality of the Bay Area.
- Reduces our reliance on nonrenewable and imported resources.
- Cost effective modes of travel for all.
- Essential mode of travel for those who do not have access to an automobile.
- Provides health and wellness benefits.
- Enjoyable recreational activity.
- Significantly less expensive infrastructure to build than roadways.
- Reduces the wear and tear on existing roadways prolonging the life of the City is infrastructure.
- Reduces the need for additional roads, travel lanes and parking.
- Potential to enhance economic viability of a community by making downtown, shopping districts and corner stores more accessible and conducive to shopping.
- Potential to build a sense of community by encouraging social interactions between residents and employees.

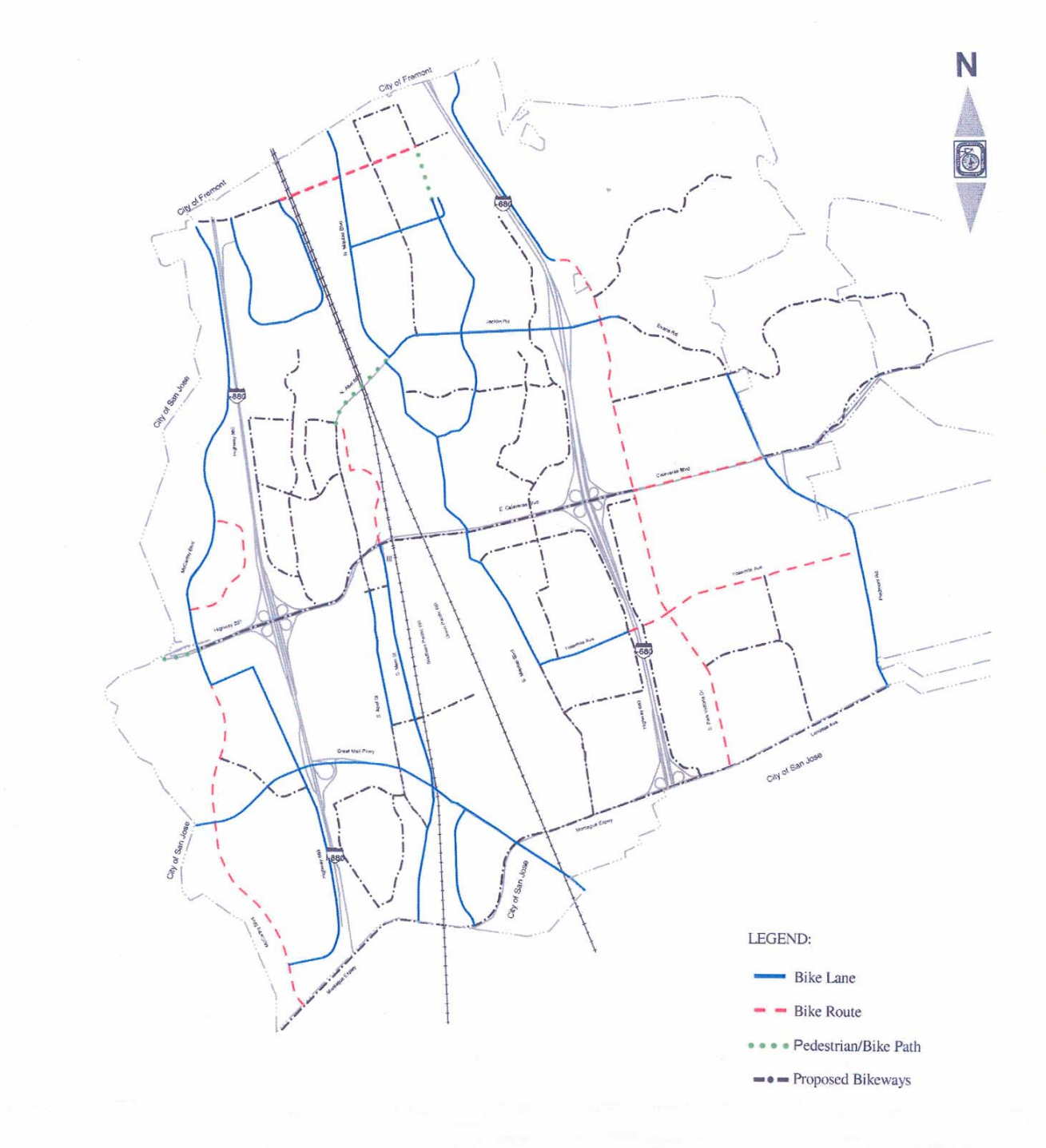
BICYCLING NETWORK

Introduction

This chapter summarizes the bikeway network in the City of Milpitas. The system is comprised of existing and proposed bikeways and trails and the numerous engineered structures needed to bridge gaps across creek channels, railroad tracks and major roadways. A discussion of the Caltrans bikeway classification system is included to describe the different types of bikeway and trail facilities proposed in Milpitas. The expanded classification system used to describe the bikeway and trail facilities in Milpitas is summarized in the chart for quick reference. A list of proposed projects by classification is also included for handy reference. Finally, the following Bikeway Map graphically indicates the existing and proposed on-street bicycle system available to pedestrian and bicyclists in the City of Milpitas.

BICYCLING NETWORK

Bikeway System Map 2003



BICYCLING NETWORK

Caltrans Bikeway Classifications

Chapter 1000 of the Caltrans Highway Design Manual describes three types of bicycle facilities. It is emphasized that the designation of bikeways as Class I, II and III should not be construed as a hierarchy of bikeways; that one is better than the other. Each class of bikeway has its appropriate application.

In selecting the proper facility, an overriding concern is to assure that the proposed facility will not encourage or require bicyclists or motorists to operate in a manner that is inconsistent with the rules of the road.

An important consideration in selecting the type of facility is continuity. Alternating segments of Class I and Class II (or Class III) bikeways along a route are generally incompatible, as street crossings by bicyclists are required when the route changes character. Also, wrong-way bicycle travel will occur on the street beyond the ends of bike paths because of the inconvenience of having to cross the street. The three bikeway classifications include Class I - Bike Paths, Class II- Bike Lanes and Class III -Bike Routes.

Class I - Bike Path

Generally, bike paths should be used to serve corridors not served by streets and highways or where wide right of way exists, permitting such facilities to be constructed away from the influence of parallel streets. Bike paths should offer opportunities not provided by the road system. They can either provide a recreational opportunity, or in some instances, can serve as direct high-speed commute routes if cross flow by motor vehicles can be minimized. The most common applications are along rivers, ocean fronts, canals, utility right of ways, abandoned railroad right of ways, within college campuses, or within and between parks. There may also be situations where such facilities can be provided as part of planned developments. Another common application of Class I facilities is to close gaps to bicycle travel caused by construction of freeways or because of the existence of natural barriers (rivers, mountains, etc.). Much of the Milpitas Trails Network is proposed as Class I Bike Paths.

Class I bikeways are facilities with exclusive right of way, with cross flows by motorists minimized. Section 890.4 of the Streets and Highways Code describes Class I bikeways as serving "the exclusive use of bicycles and pedestrians." However, experience has shown that if significant pedestrian use is anticipated, separate facilities for pedestrians are necessary to minimize conflicts. Dual use by pedestrians and bicycles is undesirable, and the two should be separated wherever possible.

BICYCLING NETWORK

Caltrans Bikeway Classifications (continued)

By State law, motorized bicycles ("mopeds") are prohibited on bike paths unless authorized by ordinance or approval of the agency having jurisdiction over the path. Likewise, all motor vehicles are prohibited from bike paths. These prohibitions can be strengthened by signage.

Class I - Bike Path Design Guidelines

The minimum paved width for a two-way bike path shall be 8 ft (2.4 m). The minimum paved width for a one-way bike path shall be 5 ft (1.5 m). A minimum 2.0 ft (0.6 m) wide graded area shall be provided adjacent to the pavement. A 2-1 /2 ft (1.0 m) graded area is recommended to provide clearance from poles, trees, walls, fences, guardrails, or other lateral obstructions. A wider graded area can also serve as a jogging path. Where the paved width is wider than the minimum required, the graded area may be reduced accordingly; however, the graded area is a desirable feature regardless of the paved width. Development of a one-way bike path should be undertaken only after careful consideration due to the problems of enforcing one-way operation and the difficulties in maintaining a path of restricted width. Where heavy bicycle volumes are anticipated and/or significant pedestrian traffic is expected, the paved width of a two-way path should be greater than 8 ft (2.4 m), preferably 12 ft (3.6 m) or more. Another important factor to consider in determining the appropriate width is that bicyclists will tend to ride side by side on bike paths, necessitating more width for safe use. Experience has shown that paved paths less than 12 ft (3.6 m) wide sometimes break up along the edge as a result of loads from maintenance vehicles.

Class II - Bike Lane

Bike lanes are established along streets in corridors where there is significant bicycle demand, and where there are distinct needs that can be served by them. The purpose should be to improve conditions for bicyclists in the corridors. Bike lanes are intended to delineate the right of way assigned to bicyclists and motorists and to provide for more predictable movements by each. But a more important reason for constructing bike lanes is to better accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets. This can be accomplished by reducing the number of lanes, or prohibiting parking on given streets in order to delineate bike lanes. In addition, other things can be done on bike lane streets to improve the situation for bicyclists, which might not be possible on all streets (e.g., improvements to the surface, augmented sweeping programs, special signal facilities, etc.). Generally, stripes alone will not measurably enhance bicycling. If bicycle travel is to be controlled by delineation, special efforts should be made to assure that high levels of service are provided with these lanes. In selecting appropriate streets for bike lanes, location criteria discussed in the next section should be considered.

Caltrans Bikeway Classifications (continued)

Class II - Bike Lane Design Guidelines

Class II bike lanes are established for the preferential use by bicyclists and are located within the paved area of roadways. Bike lane stripes are intended to promote an orderly flow of traffic, by establishing specific lines of demarcation between areas reserved for bicycles and lanes to be occupied by motor vehicles. Bike lane signs and pavement markings provide the designation. Bike lane stripes can increase bicyclists' confidence that motorists will not stray into their path of travel if they remain within the bike lane. Likewise, with more certainty as to where bicyclists will be, passing motorists are less apt to swerve toward opposing traffic in making certain they will not hit bicyclists.

Class II bike lanes shall be one-way facilities. Two-way bike lanes (or bike paths that are contiguous to the roadway) are not permitted, as such facilities have proved unsatisfactory and promote riding against the flow of motor vehicle traffic.

Typical Class II bikeway width is 5 ft to 12 ft (1.2m to 3.6m) depending upon adjacent facilities such as on-street parking and curb and gutter design. Bike lanes are located between the parking area and the traffic lanes. As indicated,
5-ft (1.5 m) shall be the minimum width of bike lane where parking stalls are parked. If parking volume is substantial or turnover high, an additional 1-ft to 2 ft (0.3 m to 0.6 m) of width is desirable. Bike lanes shall not be placed between the parking area and the curb.

Class III - Bike Route

Class III bike routes are intended to provide continuity to the bikeway system. Bike routes are established along through routes not served by Class I or II bikeways, or to connect discontinuous segments of bikeway (normally bike lanes). Class III facilities are shared facilities, either on the street with motor vehicles, or on the sidewalks with pedestrians. In either case bicycle usage is secondary. Class III facilities are established by placing Bike Route signs along roadways. Minimum widths for Class III bike routes are not presented, as the acceptable width is dependent on many factors, including the volume and character of vehicular traffic on the road, speeds, vertical and horizontal alignment, sight distance, and parking conditions.

Since bicyclists are permitted on all roadways (except prohibited freeways), the decision to sign the route should be based on the advisability of encouraging bicycle travel on the route.

Caltrans Bikeway Classifications (continued)

Bike routes are shared facilities that serve either to:

- Provide continuity to other bicycle facilities (usually Class II bikeways); or
- Designate preferred routes through high demand corridors.

As with bike lanes, designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists. Normally, bike routes are shared with motor vehicles. The use of sidewalks as Class III bikeways is strongly discouraged.

On-street Bike Route Criteria. To be of benefit to bicyclists, bike routes should offer a higher degree of service than alternative streets. Routes should be signed only if the following apply:

- They provide for through and direct travel in bicycle demand corridors.
- Connect discontinuous segments of bike lanes.
- An effort has been made to adjust traffic control devices (stop signs, signals) to give greater priority to bicyclists, as compared with alternative streets. This could include placement of bicycle-sensitive detectors on the right-hand portion of the road, where bicyclists are expected to ride.
- Street parking has been removed or restricted in areas of critical width to provide improved safety.
- Surface imperfections or irregularities have been corrected (e.g., utility covers adjusted to grade, potholes filled, etc.).
- Maintenance of the route will be at a higher standard than that of other comparable streets (e.g., more frequent street sweeping).

BICYCLING NETWORK

Caltrans Bikeway Classifications (continued)

Class I - Expanded Sidewalk

The Trails Master Plan proposes an additional type of bikeway facility. This facility is identified as a Class I - Expanded Sidewalk and is located behind the curb. This facility is specifically used to connect an off-street trail with the on-street bicycle system. This improvement is installed along short stretches of roadway to facilitate safe ingress and egress between the trails network and on-street bicycle system. Frequently, a trail will cross a city street at a mid-block location. In order to encourage riders to follow the rules of the road short stretches of expanded sidewalk will be developed to connect trail users to the closest signalized intersection. Short stretches of expanded sidewalk are also proposed across bridges where underpasses have been deemed infeasible. Chapter 1000 of the Caltrans Highway Design Manual describes sidewalk bikeway criteria that should be reviewed in conjunction with the installation of any Class I - Expanded Sidewalk facility. The minimum width of an expanded sidewalk that can accommodate both bicycle and pedestrian use is 10'. Where possible this width will be enhanced with the provision of an offset, whether from the travel lane or behind the raised curb.

Sidewalk Bikeway Design Guidelines

It is important to recognize that the development of extremely wide sidewalks does not necessarily add to the safety of sidewalk bicycle travel. Wide sidewalks will encourage higher speed bicycle use and can increase potential for conflicts with motor vehicles at intersections, as well as with pedestrians and fixed objects. Sidewalk bikeways should be considered only under special circumstances, such as:

To provide bikeway continuity along high speed or heavily traveled roadways having inadequate space for bicyclists, and uninterrupted by driveways and intersections for long distances.

On long, narrow bridges. In such cases, ramps should be installed at the sidewalk approaches. If approach bikeways are two-way, sidewalk facilities should also be two-way.

BICYCLING NETWORK

Caltrans Bikeway Classifications (continued)

Whenever sidewalk bikeways are established, a special effort should be made to remove unnecessary obstacles. Whenever bicyclists are directed from bike lanes to sidewalks, curb cuts should be flush with the street to assure that bicyclists are not subjected to problems associated with crossing a vertical lip at a flat angle. Also curb cuts at each intersection are necessary, as well as bikeway yield or stop signs at uncontrolled intersections. Curb cuts should be wide enough to accommodate adult tricycles and two-wheel bicycle trailers.

In residential areas, sidewalk riding by young children too inexperienced to ride in the street is common. With lower bicycle speeds and lower auto speeds, potential conflicts are somewhat lessened, but still exist. Nevertheless, this type of sidewalk bicycle use is accepted. But it is inappropriate to sign these facilities as bikeways. Bicyclists should not be encouraged (through signing) to ride facilities that are not designed to accommodate bicycle travel.

A classification system used to describe the existing and proposed bikeway and trail networks in the City of Milpitas is provided below.

Milpitas Bikeway and Trails Classifications

- Class I - Bike Path
- Class I - Expanded Sidewalk
- Class II - Bike Lane
- Class III - Bike Route

BICYCLING NETWORK

Proposed Bikeway Projects

The following list identifies the bikeway and trail projects proposed in Milpitas. This list must be updated annually as new traffic engineering concepts and opportunities develop. Priority is given to those projects located within the Midtown Area.

Class I - Bicycle Paths

All trails identified in Trails Master Plan.

Bike Path connecting from the San Jose path west of the Coyote Creek along the south side of SR237 to the McCarthy Overpass.

Bike Path or lesser along Calaveras Road beginning at the Evans-Piedmont intersection to the Downing Road intersection. This project is to be included in the project that widens the road to its ultimate width to include a bikeway facility plus shoulder and a walkway.

Class I - Expanded Sidewalks

North McCarthy Blvd at the Coyote Creek bridges

Class II - Bicycle Lanes

Bikeway - Caltrans will provide a 5' shoulder through the reconstructed SR237/I880 interchange from the diagonal ramps at the McCarthy overpass to the Calaveras Overpass.

Bikeway - A bikeway is proposed along South Milpitas Boulevard extending from the existing bike lanes at Yosemite to the Montague Expressway. This can be connected either as a bike lane or route. A connection could also be provided to the Berryessa Creek Trail that parallels South Milpitas Boulevard in this vicinity.

Bike Lanes are to be provided along Dixon Landing Road with the reconstruction of the Dixon Landing Road/I880 Interchange from the North McCarthy Boulevard intersection to the Milmont Drive intersection.

Bike Lanes or a Route will be provided easterly from Milmont Avenue to the North Milpitas Boulevard intersection.

Proposed Bikeway Projects (continued)

Bike Lanes or a Route will be provided along Jacklin Road extending the bikeway from the Hillview Drive intersection easterly to the continuation of Evans Road. This bikeway system is proposed to continue southerly connecting with the existing bike lanes along Piedmont Road.

Bike Lanes on Main Street shall be relocated to South Abel Street.

Bike Lanes or a Route will be provided along Curtis Avenue from Abel Street and east of the railroad tracks to connect it to the future path (widened sidewalk) on Curtis Avenue along the residential subdivision.

Class III - Bicycle Routes

Bike Route - extending from the Calaveras overpass along SR237 to the Abbott Avenue intersection.

Bike Route - extending from Abbott Avenue along Serra Way to the existing bike lanes along South Main Street.

Pedestrian/Bicycle Bridges

- Berryessa Creek - Gill Park to Town Center.
- Providing a bridge that connects to Curtis Avenue and Main Street over the Union Pacific Railroad tracks connecting to Milpitas Boulevard and Yosemite Drive.

Support Facilities

- At Transportation Hubs
- At Parks
- At Shopping Districts

GENERAL PLAN POLICY

Principles and Policies

"Guiding Principles" describe the City's intent. Each "Guiding Principle" is followed by a series of "Implementing Policies" that are actions to be undertaken in order to achieve the results called for by the "Guiding Principles."

GP -1: Guiding Principle #1

Provide and maintain a comprehensive system of sidewalks, bicycle lanes and routes and off-street trails that connects all parts of the city and promotes walking and bicycling as a form of transportation and recreation. Expand the current pedestrian and bicycle facilities in order to continue to encourage a mode shift to non-motorized transportation.

Implementing Policies

Complete the on-street bicycle circulation system as depicted and describe in the Bikeways Master Plan and Map.

Incorporate bicycle and pedestrian facilities into the design of interchanges, intersections and other street improvements projects. All street improvement projects should be viewed as an opportunity to enhance the bicycle and pedestrian system.

Acquire adequate roadway right-of-way where needed to complete the Bikeways Master Plan.

Develop connections between the off-street trail system and on-street bicycle system to fully integrate these facilities.

Make improvements to roads, signs, and traffic signals as needed to improve bicycle travel.

Provide regular maintenance of bicycle and pedestrian facilities that includes, and is not limited to sweeping, tree and shrub pruning, litter collection and security patrol.

Work with the County and neighboring cities to implement a regional bikeway system.

Maintain the Bicycle Transportation Advisory Commission (BTAC) as an advisory body to the City Council on matters affecting modification and expansion of the City's bikeway system, trail system and other non-motorized forms of transportation.

Principles and Policies (continued)

GP - 2: Guiding Principle #2

Ensure there is secure bicycle parking and sufficient end-of-trip support facilities for bicyclists at centers of public and private activity.

Implementing Policies

Install bicycle lockers and/or racks at all public/civic buildings and other community facilities.

Encourage existing shopping centers and businesses to install bicycle parking facilities.

Encourage new office development to include end-of-trip facilities such as secure bicycle parking, on-site showers and clothing storage lockers, commute maps and bicycle repair equipment.

In the Mid Town Area, secure and conveniently located bicycle parking shall be provided in all new residential and employment developments with parking structures. As a guideline, the number or bicycle spaces should be equivalent to at least 5% of the overall parking requirements. At large employment destinations (greater that 50,000 square feet), showers and lockers should be provided in addition to bicycle parking.

Along Main Street (between Weller and Curtis) bicycle racks should be placed on every block as a part of streetscape improvements, for the joint use of all nearby tenants.

GP - 3: Guiding Principle #3

Promote intermodal commuting options.

Implementing Policies

Support arrangements that accommodate bicycles on all public transportation.
Recommend bicycle facilities at all new transit centers.

Principles and Policies (continued)

GP - 4: Guiding Principle #4

Actively promote bicycling and bicycle safety as a part of daily life in Milpitas.

Implementing Policies

Continue to distribute the Milpitas Bicycle Map and other information and about bicycle safety at City buildings and schools, street fairs and special events.

Introduced Fall 1998, the Suggested Routes to School Program's main objective is to educated school age children about general traffic safety. In addition, the program reinforces basic bicycle and pedestrian safety skills, educates parents about the traffic issues in and around their child's school and encourages parents and children to walk or bike to school together. Since implementation, the Suggested Routes to School Program increases each year, improving traffic safety awareness around the schools and community.

Consider providing a fleet of City bicycles for staff use.

Participate quarterly in a Child Safety Task Force with the police department, City Council members, and staff from the Milpitas Unified School District.

Participate monthly with the Traffic Safety Communities Network of Santa Clara County which is comprised of local agencies, police & sheriff departments, California Highway Patrol, and interested organizations to discuss bicycle and pedestrian collision reduction measures and safety education.

Encourage the exchange of information with other Bicycle Advisory Commissions

Participate in regional Transportation Demand Management programs to promote alternate travel modes to employment including transit, carpool/vanpool, and bicycle commuting.

GP - 5: Guiding Principle #5

Promote increased funding for annual maintenance and capital improvement for bicycle projects.

Implementing Policies

Principles and Policies (continued)

Promote the use of a percentage of the Streets budget for bicycle and pedestrian projects.

Actively pursue external grant funds for bicycle and pedestrian capital improvements projects.

Encourage developer contributions toward pedestrian and bicycle capital improvement projects and end-of-trip support facilities.

GENERAL PLAN POLICY

Roadway Design

Roadway Design to Accommodate Bicycle Use

It shall be the policy of the City of Milpitas that all roadways within the city and under city jurisdiction shall be useable for both the motoring and cycling public. In order to promote safety and minimize conflicts between motorists and cyclists certain design considerations will be taken into consideration on all new construction and right of way changes to existing roadways. It is the policy that, to the greatest extent possible, arterial streets will incorporate bike lanes; collector streets will incorporate bike routes or lanes; residential streets do not require special treatment, but roadway construction shall promote safe bicycling.

Since 1991, the City has had a Bicycle Transportation Advisory Commission (BTAC) to serve as an advisory body to the City Council on matters effecting modifications and expansion of the City's Bikeway System and other forms of non-motorized transportation. Where the guidelines of this policy cannot be adhered to, BTAC will be included in the review and resolution through the staff liaison, the Traffic Engineer. The comments shall be incorporated within the Engineering Division's review and processing of various improvement plans.

Design Guidelines

This section delineates specific areas requiring attention to ensure the safety of all roadway users. On streets without bike lanes, the outside through traffic lanes shall be wide enough (minimum of 20 feet [6.1 m] where parking is permitted and 16 feet [4.9 m] where parking is not permitted) for bicycles to share. Local residential streets are generally 36 feet (11 m) wide for both directions of travel. These streets are not affected by this policy.

Arterial Roadways

When new arterial roadways are designed, there should be sufficient roadway surface to allow a minimum of a 5 foot (1.5 m) BIKE LANE. The bike lane should be striped and signed. A separate BIKE PATH paralleling the roadway meets this requirement. For construction projects where a right-of-way purchase is required, every attempt shall be made to retrofit the roadway to this standard.

Roadway surfaces shall avoid grates, joints, access covers, and other roadway imperfections in excess of 1 /2 inch (3.2 cm) that parallel the direction of travel in the BIKE LANE. Catch basin grate openings shall not be greater that 1" and these are to be perpendicular to the flow of traffic.

Roadway Design (continued)

Collector Streets

On collector streets where parking is permitted, a minimum of a 20 foot (6.1 m) curb lane shall be provided. This accommodates a properly signed BIKE ROUTE. Roadway imperfections shall be avoided in the outer 5 feet (1.5 m) of the roadway.

Residential Streets

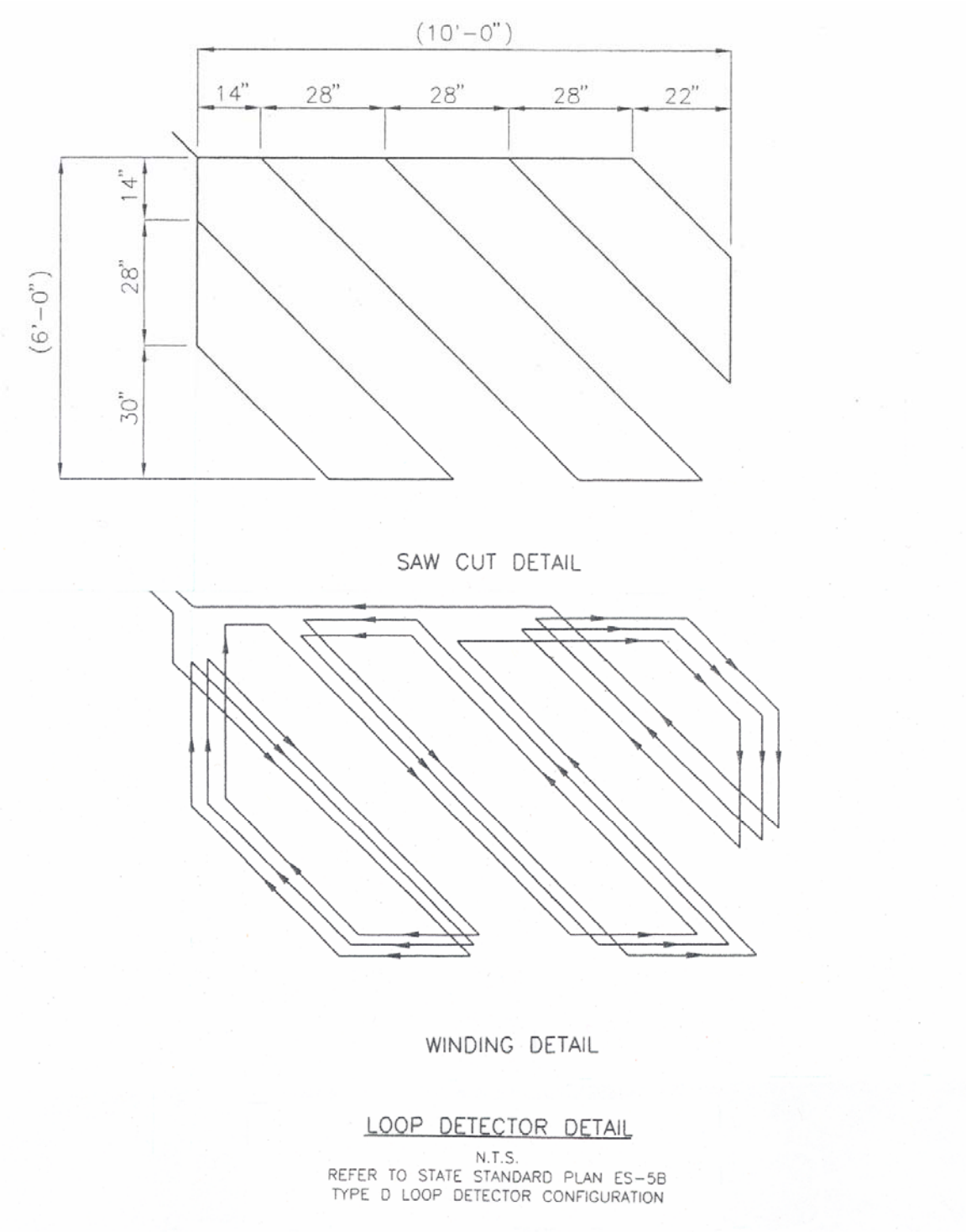
Due to their relatively low traffic density and lower traffic speeds, specifically designated BIKE ROUTES or BIKE LANES are not required. Roadway imperfections should be avoided across the entire roadway surface.

Intersections

Traffic signals shall allow cyclists to activate a green light from the correct lane position for their direction of travel. Caltrans Type D loops are recommended at the limit line in left-turn lanes and in the rightmost through lane. This loop shall be 6' x 10' (1.8 m x 3.1 m) followed by a quadruple Type C loop. At intersections with two left-turn lanes, the bike sensitive loop should be located in the right lane. This will allow the bicyclist to end up to the right of vehicle traffic once he completes the left turn. On street with bike lanes at the limit line the traffic signal shall be activated by means of a detector loop imbedded in the bike lane or a push-button device located where it is accessible to a bicyclist.

It is not necessary to meet this standard if the direction of travel for the intersection is the "rest on green" direction or the signal utilizes video for detecting traffic. Existing traffic signals shall be retrofitted where possible.

Traffic signals shall be timed to provide adequate time for cyclists to start from a complete stop when the light turns to green and cross the intersection before the light changes back to red. It shall be timed to provide adequate time for a moving bicycle to clear the intersection before turning green for the cross traffic. Added seconds will be given to the initial green time setting to accommodate bicycle traffic.



SAW CUT DETAIL

WINDING DETAIL

LOOP DETECTOR DETAIL

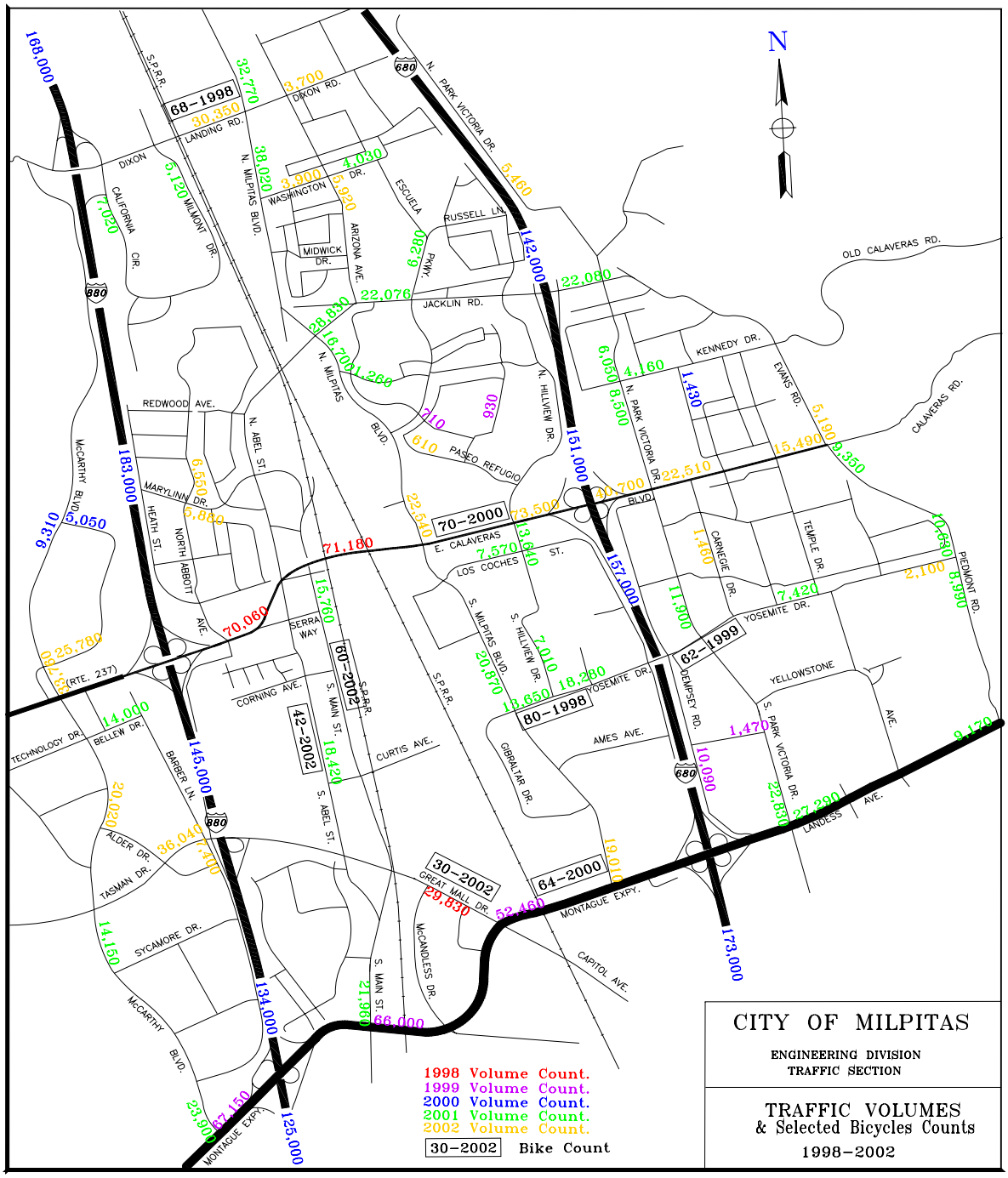
N.T.S.
REFER TO STATE STANDARD PLAN ES-5B
TYPE D LOOP DETECTOR CONFIGURATION

APPENDICES

SPEED LIMIT MAP

APPENDICES

TRAFFIC VOLUME MAP
(with selected Bicycles Counts)



APPENDICES

SUGGESTED ROUTES TO SCHOOL

Elementary School Maps

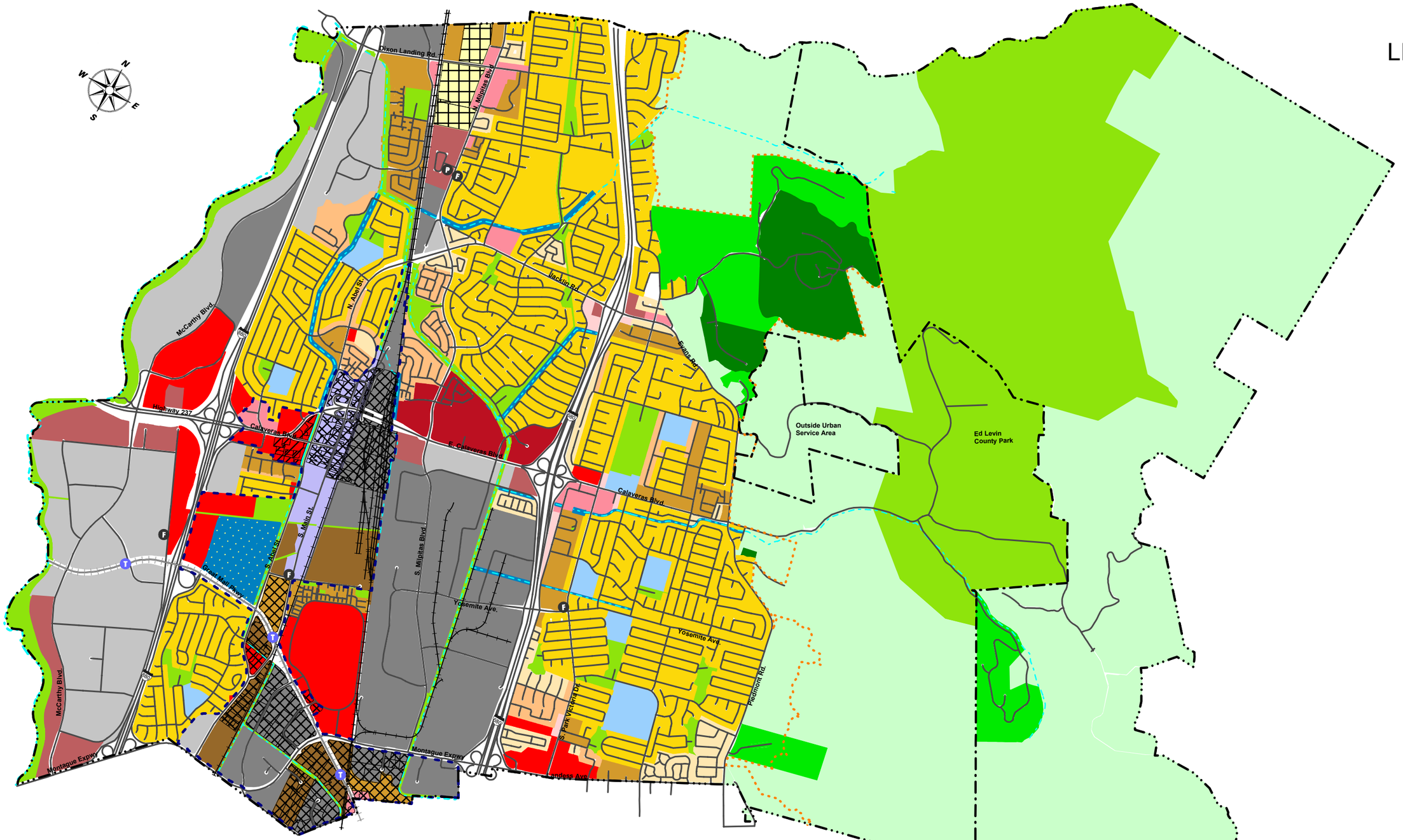
a. **Burnett**
b. **Curtner**
c. **Pomeroy**
d. **Randall**
e. **Rose**
f. **Sinnott**
g. **Spangler**
h. **Weller**
i. **Zanker**

j. **Safety Tips**

Suggested Routes to School Program

APPENDICES

2003 GENERAL PLAN MAP



City of Milpitas
GENERAL PLAN
August 2003

0 1500 3000 4500 6000 7500 '

LEGEND:

- Hillside Very Low Density *(up to 1.0 units/10 gross acres)*
- Hillside Low Density *(up to 1.0 units/gross acre)*
- Hillside Medium Density *(up to 3.0 units/gross acre)*
- Single Family Low Density *(3-5 units/gross acre)*
- Single Family Moderate Density *(6-15 units/gross acre)*
- Multi-Family Medium Density *(7-11 units/gross acre)*
- Multi-Family High Density *(12-20 units/gross acre; up to 40 units/gross acre with special findings and PUD approval)*
- Multi-Family Very High Density *(31-40 units/gross acre; up to 60 units/gross acre in TOD)*
- Mobile Home Park
- Professional/Administrative Office
- Retail Sub-Center
- Highway Services
- General Commercial
- Town Center
- Mixed Use
- Manufacturing & Warehousing
- Industrial Park
- Schools
- Correctional Facility
- Park and Open Space
- Creeks
- Waterways
- Sphere of Influence
- Urban Service Boundary
- Urban Growth Boundary *
- Fire Stations
- Police Station
- LRT Stations
- Midtown boundary
- light_rail
- railroads

* The UGB line is located along property lines except for APNs 92-35-002, 92-34-008, and the Lee's Orchard Subdivision where the line is located along the 400 foot contour as shown on the City's contour maps.